

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Original) A centralized management authentication apparatus that performs centralized management of authentication to enable a wireless terminal apparatus to perform roaming on a plurality of wireless networks each having at least one radio base station, comprising:

an information acquirer that acquires service area information of each of the plurality of wireless networks and information of a current location of the wireless terminal apparatus;

an authentication information notification destination searcher that specifies at least one of the wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus based on the acquired service area information and information of the current location; and

an authentication information manager that notifies authentication information required for authentication of the wireless terminal apparatus to the at least one of the wireless networks specified in the authentication information notification destination searcher before the wireless terminal apparatus moves to the at least one of the wireless networks.

2. (Original) The centralized management authentication apparatus according to claim 1, wherein the plurality of wireless networks has a cellular wireless network provided with a function of managing the location of the wireless terminal apparatus, and the authentication information notification destination searcher acquires the information of the current location of the wireless terminal apparatus from the cellular wireless network.

3. (Original) The centralized management authentication apparatus according to claim 1, wherein the authentication information manager notifies one of the wireless networks that requests the authentication information of the authentication information generated by an authentication information generating apparatus of the cellular wireless network.

4. (Original) The centralized management authentication apparatus according to claim 2, wherein the authentication information notification destination searcher acquires the service area information of each of the wireless networks from the cellular wireless network.

5. (Original) The centralized management authentication apparatus according to claim 2, wherein a location management apparatus of the cellular wireless network manages the service area information and the information of the current location of the wireless terminal apparatus, and based on the service area information and wireless terminal location information managed by the location management apparatus of the cellular wireless network, the authentication information notification destination searcher specifies at least one of the wireless networks that provides communication services in a peripheral area of the current location of the wireless terminal apparatus.

6. (Original) A cellular wireless network comprising the centralized management authentication apparatus according to claim 1.

7. (Original) An authentication apparatus comprising:  
an authentication information holder that holds authentication information obtained by making a request for authentication information to a centralized management authentication apparatus that performs centralized management of authentication in movement to each of a plurality of wireless networks of a wireless terminal apparatus; and  
an authentication performer that uses the authentication information held in the authentication information holder in authentication of the wireless terminal apparatus in a service area of a movement destination when the wireless terminal apparatus moves between service areas of a wireless network to which the authentication apparatus belongs.

8. (Original) A wireless terminal apparatus comprising:  
a receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite;  
a current location measure that measures a current location using the signal received from the GPS satellite; and  
a current location information notifier that notifies a cellular wireless network of the current location measured in the current location measurer.

9. (Original) A radio base station constituting a wireless network, comprising:

a receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite;

a current location measure that measures a current location using the signal received from the GPS satellite; and

a current location information notifier that notifies a cellular wireless network of the current location measured in the current location measurer.

10. (Currently Amended) A wireless communication system comprising:

the cellular wireless network according to claim 6;

~~the an authentication apparatus according to claim 7~~  
comprising an authentication information holder that holds authentication information obtained by making a request for authentication information to a centralized management authentication apparatus that performs centralized management of authentication in movement to each of a plurality of wireless networks of a wireless terminal apparatus, and an authentication performer that uses the authentication information held in the authentication information holder in authentication of the

wireless terminal apparatus in a service area of a movement destination when the wireless terminal apparatus moves between service areas of a wireless network to which the authentication apparatus belongs;

the a wireless terminal apparatus according to claim 8 comprising a first receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite, a first current location measurer that measures a current location using the signal received from the GPS satellite, and a first current location information notifier that notifies a cellular wireless network of the current location measured in the first current location measurer; and

the a radio base station according to claim 9 constituting a wireless network and comprising a second receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite, a second current location measurer that measures a current location using the signal received from the GPS satellite, and a second current location information notifier that notifies a cellular wireless network of the current location measured in the second current location measurer.

11. (Original) An authentication provider unit that manages entire wireless networks, comprising the centralized management authentication apparatus according to claim 1.

12. (Original) The authentication provider unit according to claim 11, further comprising:

a location management apparatus that manages the service area information of each of a plurality of wireless networks and current location information of a wireless terminal apparatus, wherein the location management apparatus acquires the location information of the wireless terminal apparatus from a cellular wireless network that performs location management of the wireless terminal apparatus.

13. (Currently Amended) A wireless communication system comprising:

the authentication apparatus according to claim 7;

the a wireless terminal apparatus according to claim 8 comprising a first receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite, a first current location measurer that measures a current location using the signal received from the GPS satellite, and a first current location information notifier that notifies a cellular wireless

network of the current location measured in the first current location measurer;

the a radio base station according to claim 9 constituting a wireless network and comprising a second receiver that receives a signal transmitted from a GPS (Global Positioning System) satellite, a second current location measurer that measures a current location using the signal received from the GPS satellite, and a second current location information notifier that notifies a cellular wireless network of the current location measured in the second current location measurer; and

the an authentication provider unit according to claim 11 that manages entire wireless networks and that comprises a centralized management authentication apparatus that performs centralized management of authentication to enable a wireless terminal apparatus to perform roaming on a plurality of wireless networks each having at least one radio base station, said centralized management authentication apparatus comprising an information acquirer that acquires service area information of each of the plurality of wireless networks and information of a current location of the wireless terminal apparatus, an authentication information notification destination searcher that specifies at least one of the wireless networks that provides



communication services in a peripheral area of the current location of the wireless terminal apparatus based on the acquired service area information and information of the current location, and an authentication information manager that notifies authentication information required for authentication of the wireless terminal apparatus to the at least one of the wireless networks specified in the authentication information notification destination searcher before the wireless terminal apparatus moves to the at least one of the wireless networks.

14. (Original) A wireless terminal authentication method in a wireless communication system comprised of a plurality of wireless networks each having at least one radio base station, comprising:

an information acquiring step of acquiring location information of a wireless terminal apparatus and service area information of each of the plurality of wireless networks;

an identifying step of identifying at least one of the wireless networks that provides communication services in a peripheral area of a location where the wireless terminal apparatus exists based on the acquired location information of

the wireless terminal apparatus and service area information of each of the plurality of wireless networks; and

an authentication information notifying step of notifying the identified wireless network of authentication information of the wireless terminal apparatus before the wireless terminal apparatus moves to the network.